

## ABSTRACT

An object is to provide an injection molding machine and an injection molding method which can prevent deterioration of injection characteristics and improve the quality of molded products. An injection molding machine includes a cylinder member; an injection member disposed in the cylinder member such that the injection member can advance and retreat; a plurality of heaters disposed on the outer circumference of the cylinder member; temperature detection sections disposed on the cylinder member at a plurality of positions along an axial direction so as to detect temperature of the cylinder member; a recording device (31) which stores a recorded target temperature distribution range indicating an optimal temperature range at each position of the cylinder member; and a control section for adjusting the set temperatures of the heaters such that each of the temperatures detected by means of the temperature detection sections falls within the target temperature distribution range. In this case, since the set temperatures of the heaters are adjusted such that the detected temperatures fall within the target temperature distribution range, the molding material within the cylinder member can be maintained in an optimal state.